RCHP-101US

Appln. No.: 10/582,266

Amendment dated: November 14, 2008 Reply to Office Action of May 29, 2008

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

- (Currently Amended) A particle comprising a complex comprising a bioactive agent joined to a complexing agent, provided that the bioactive agent is other than a polynucleotide or an oligonucleotide, wherein the particle has a bioactive function conferred by the bioactive agent, and wherein the particle has a diameter from about 1 nm to about 1000 microns.
- 2. (Original) The particle of claim 1, wherein the bioactive agent and/or the complexing agent have a net positive charge or have a positively charged region of at least +6.
- 3. (Previously Presented) The particle of claim 1, wherein the bioactive agent has a net positive charge or a positively charged region of at least +6 and the complexing agent has a net negative charge or a negatively charged region of at least -6.
- 4. (Previously Presented) The particle of claim 2, wherein the net positive charge is conferred by at least six amino acids selected from the group consisting of lysine, arginine, and histidine.
- 5. (Previously Presented) The particle of claim 2, wherein the positively charged region of the bioactive agent is a heparin binding domain.
- 6. (Previously Presented) The particle of claim 2, wherein the bioactive agent has a net negative charge or has a negatively charged region of at least -6 when the complexing agent has a net positive charge or has a positively charged region of at least +6, or the complexing agent has a net negative charge or has a negatively charged region of at least -6 when the bioactive agent has a net positive charge or has a positively charged region of at least +6.

## 7. (Canceled)

 (Previously Presented) The particle of claim 1, wherein the bioactive agent is a growth factor, hormone, peptide, protein, or polysaccharide.

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- (Original) The particle of claim 1, wherein the bioactive agent is a growth factor.
- (Previously Presented) The particle of claim 9, wherein the growth factor is VEGF, PDGF, FGF, bFGF, or HGH.
- 11. (Previously Presented) The particle of claim 1, wherein the bioactive agent is at least one of VEGF or PDGF.
- 12. (Previously Presented) The particle of claim 1, wherein the bioactive agent is insulin, erythropoietin, bone morphogenic proteins, human growth hormone, human chorionic gonadotrophin, polysaccharides, transferrin, TGF-beta receptors, integrin heterodimer receptor, or Fas-L.
- 13. (Previously Presented) The particle of claim 1, wherein the complexing agent is a polysaccharide, glycosaminoglycan, complex carbohydrate, or polyacid.
- 14. (Previously Presented) The particle of claim 1, wherein the complexing agent is a-dextran, dextran sulfate, chitosan, heparin, heparan, heparan sulfate, hyaluronic acid, chondroitin, chondroitin sulfate, dermatan sufate, keratan sulfate, pentasan sulfate, alginate, carageenan, polyglutamic acid, or 3-polyphosphoric acid.
- 15. (Original) The particle of claim 14, wherein the complexing agent is dextran or dextran sulfate having a molecular weight of about 2 KDa to about 10,000 KDa.
- (Original) The particle of claim 15, wherein the molecular weight of dextran or dextran sulfate is from 5 KDa to 500 KDa.
- 17. (Original) The particle of claim 1, wherein the particle is free of poly(ethyleneimine).
- 18. (Canceled)
- 19. (Previously Presented) The particle of claim 1, wherein the complex is contained within a matrix.

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 (Previously Presented) The particle of claim 19, wherein the matrix is a biodegradable polymer, colloidal particle, liposome, emulsion, solid particle, magnetic particle, protein, or polypertide.

- 21. (Original) The particle of claim 20, wherein the particle is free of poly(ethyleneimine).
- 22. (Original) The particle of claim 1, wherein the particle is completely biodegradable.
- 23. (Original) The particle of claim 1, wherein the particle comprises at least 40% of the bioactive agent.
- 24. (Original) The particle of claim 1, wherein the particle comprises from about 40% to about 90% of the bioactive agent.
- 25. (Previously Presented) The particle of claim 1, wherein the particle consists essentially of the bioactive agent joined to the complexing agent.
- 26. (Currently Amended) A particle comprising a complex comprising a bioactive agent joined to a complexing agent, wherein one of the bioactive agent and the complexing agent is a cationic agent or an anionic agent having a net charge or a region having a net charge of at least 6 units and wherein the particle has a bioactive function conferred by the bioactive agent, and wherein the particle has a diameter from about 1 nm to about 1000 microns.
- 27. (Original) The particle of claim 26, wherein the bloactive agent is the cationic agent and the complexing agent is the anionic agent.
- 28. (Previously Presented) The particle of claim 27, wherein the cationic agent is a growth factor, hormone, peptide, protein, or polysaccharide.
- 29. (Original) The particle of claim 28, wherein the cationic agent is a growth factor.
- (Original) The particle of claim 29, wherein the growth factor is VEGF, PDGF, FGF, bFGF, or HGH.

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 (Previously Presented) The particle of claim 27, wherein the cationic agent is at least one of VEGF or PDGF.

- 32. (Previously Presented) The particle of claim 27, wherein the anionic agent is a polysaccharide, glycosaminoglycan, complex carbohydrate, or polyacid.
- 33. (Previously Presented) The particle of claim 27, wherein the anionic agent is dextran, dextran sulfate, chitosan, heparin, heparan, heparan sulfate, hyaluronic acid, chondroitin, chondroitin sulfate, dermatan sufate, keratan sulfate, pentasan sulfate, alginate, carageenan, polyglutamic acid, or 3-polyphosphoric acid.
- 34. (Previously Presented) The particle of claim 33, wherein the dextran or dextran sulfate has a molecular weight of about 2 KDa to about 10,000 KDa.
- 35. (Original) The particle of claim 26, wherein the particle is free of poly(ethyleneimine).
- (Previously Presented) A particle consisting essentially of a complex between a growth factor joined to a polysaccharide.

## 37-47. (Canceled)

- 48. (Previously Presented) The particle of claim 36, wherein the growth factor is VEGF or PDGF.
- 49. (Currently Amended) A particle comprising a complex of a growth factor joined to dextran, dextran sulfate, chitosan, heparin, heparan, heparan sulfate, hyaluronic acid, chondroitin, chondroitin sulfate, dermatan sufate, keratan sulfate, pentasan sulfate, alginate, carageenan, polyglutamic acid, or 3-polyphosphoric acid, wherein the particle has a diameter from about 1 nm to about 1000 microns.
- (Previously Presented) The particle of claim 49, wherein the growth factor is VEGF or PDGF.

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## 51. (Canceled)

- 52. (New) The particle of claim 1, wherein the bioactive agent and complexing agent are foined by electrostatic interactions.
- 53. (New) The particle of claim 1, wherein the bloactive agent and complexing agent are joined by hydrophobic interactions.
- 54. **(New)** The particle of claim 1, wherein the bioactive agent and complexing agent are joined by hydrogen bonding.
- 55. **(New)** The particle of claim 1, wherein the bloactive agent and complexing agent are conjugated.
- 66. (New) A particle comprising a complex comprising a bioactive agent conjugated to a complexing agent, provided that the bioactive agent is other than a polynucleotide or an oligonucleotide, wherein the particle has a bioactive function conferred by the bioactive agent\_and has a diameter from about 1 nm to about 1000 microns.
- 57. **(New)** The particle of claim 1, wherein the particle has a diameter from 15 nm to about 100 microns.
- 58. (New) The particle of claim 1, wherein the particle has a diameter from 150 nm to about 220 nm.
- 59. **(New)** The particle of claim 26, wherein the particle has a diameter from 15 nm to about 100 microns.
- 60. (New) The particle of claim 26, wherein the particle has a diameter from 150 nm to about 220 nm.
- 61. (New) The particle of claim 49, wherein the particle has a diameter from 15 nm to about 100 microns.

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62. (New) The particle of claim 49, wherein the particle has a diameter from 150 nm to about 220 nm.